

What is claimed is:

1. A head suspension comprising:
a mounting region;
a bend region adjacent the mounting region comprising:
5 a bend member; and
an aperture bounded by the bend member and the mounting region;
and
a load beam region with a damping material support structure adjacent the
bend member, the damping material support structure offset from
10 the bend member and extending into the aperture.
2. The head suspension of claim 1, in which the load beam region
comprises:
a proximal end adjacent the bend region;
15 a distal end with a rigid portion, the distal end extending from a proximal
end; and
a flexure affixed to the rigid portion supporting a read/write head.
3. The head suspension of claim 2, in which the damping material
20 support structure extending into the aperture from the proximal end of the load
beam.
4. The head suspension of claim 2, in which the load beam further
comprises a stiffening rail commencing at the proximal end of the load beam and
25 extending to the rigid portion of the load beam.
5. The head suspension of claim 2, in which the bend member is a
strut adjacent the damping material support structure, the strut extending from the
mounting region and terminating at the proximal end of the load beam region.
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6. The head suspension of claim 5, in which the strut is a plurality of
struts, and in which the mounting region, the damping material support structure
and the plurality of struts form boundaries of the aperture.

7. The head suspension of claim 5, in which the strut is a plurality of struts, and in which the damping material support structure, the plurality of struts along with the proximal end of the load beam region form boundaries of an isolation aperture, the isolation aperture precludes interference by the damping material support structure with the plurality of struts.

8. The head suspension of claim 7, in which the proximal end of the load beam region comprises a partially etched mass adjustment area.

9. The head suspension of claim 8, in which the proximal end of the load beam portion supports the damping material affixed to the partially etched mass adjustment area.

10. The head suspension of claim 9, in which the damping material partially obstructs the isolation aperture, and further in which the damping material is supported by the damping material support structure in addition to being supported by the plurality of struts.

11. The head suspension of claim 10, in which the damping material has a damping coefficient higher than the damping coefficient of the material of the plurality of struts.

12. A method of forming a head suspension comprising:
forming a mounting region of the head suspension adjacent a bend region of the head suspension while a load beam region is formed adjacent the bend region;
removing material from the bend region to form a strut and a damping material support structure;
severing the strut from the damping material support structure to provide an isolation aperture in addition to a base portion of the damping material support structure; and

affixing a damping material to the strut in addition to the damping material support structure, wherein the damping material partially obstructs the isolation aperture.

- 5 13. The method of claim 12, in which the step of forming a mounting region comprises:
- removing material from the mounting region to form a mounting aperture;
- and
- securing an attachment member adjacent a mounting aperture for
- 10 attachment of the head suspension to an actuator of a data storage device.
14. The method of claim 12, in which the step of forming the load beam region comprises:
- 15 forming a proximal end of the load beam and a distal end of the load beam, the distal end extending from the proximal end, the proximal end located adjacent the strut and the base portion of the damping material support structure;
- forming a stiffening rail commencing at the proximal end and extending to
- 20 the distal end;
- providing a rigid portion extending from the distal end, for receipt of a flexure; and
- etching a damping material receipt area adjacent the proximal end of the load beam, for receipt of the damping material.
- 25 15. The method of claim 14, further comprises:
- attaching the flexure to the rigid portion for receipt of a read/write head of the data storage device; and
- joining an attachment member adjacent a mounting aperture for attachment of the head suspension to an actuator of the data storage device.
- 30 16. The method of claim 12, in which the damping material exhibits a damping coefficient higher than the damping coefficient of the material adjacent the isolation aperture.

17. A data storage device comprising a rotating disc in a data exchange relationship with a read/write head, the read/write head supported by a head suspension formed by steps for forming a head suspension.
- 5 18. The data storage device of claim 17, in which the head suspension comprises:
- a mounting region;
 - a bend region adjacent the mounting region comprising:
 - 10 a bend member; and
 - an aperture bounded by the bend member and the mounting region;
 - and
 - a load beam region with a damping material support structure adjacent the bend region, the damping material support structure offset from the bend member and extending into the aperture.
- 15 19. The data storage device of claim 18, in which the load beam region comprises:
- a proximal end adjacent the bend region, the damping material support structure extending into the aperture from the proximal end of the
 - 20 load beam;
 - a distal end with a rigid portion, the distal end extending from a proximal end; and
 - a flexure affixed to the rigid portion supporting the read/write head.
- 25 20. The data storage device of claim 17, in which the steps for forming a head suspension comprises:
- forming a mounting region of the head suspension adjacent a bend region of the head suspension while a load beam region is formed adjacent the bend region;
 - 30 removing material from the bend region to form a strut and a damping material support structure;

severing the strut from the damping material support structure to provide an isolation aperture in addition to a base portion of the damping material support structure; and
5 affixing a damping material to the strut and the damping material support structure, wherein the damping material partially obstructs the isolation aperture.